

# Edoardo Charbon

## List of Publications by Year in descending order

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219  
papers

7,442  
citations

53794

45  
h-index

76900

74  
g-index

225  
all docs

225  
docs citations

225  
times ranked

4008  
citing authors

#	ARTICLE	IF	CITATIONS
1	Design and characterization of a CMOS 3-D image sensor based on single photon avalanche diodes. IEEE Journal of Solid-State Circuits, 2005, 40, 1847-1854.	5.4	293
2	Cryo-CMOS Circuits and Systems for Quantum Computing Applications. IEEE Journal of Solid-State Circuits, 2018, 53, 309-321.	5.4	276
3	Single-photon avalanche diode imagers in biophotonics: review and outlook. Light: Science and Applications, 2019, 8, 87.	16.6	269
4	A 128 $\times$ 128 Single-Photon Image Sensor With Column-Level 10-Bit Time-to-Digital Converter Array. IEEE Journal of Solid-State Circuits, 2008, 43, 2977-2989.	5.4	240
5	Megapixel time-gated SPAD image sensor for 2D and 3D imaging applications. Optica, 2020, 7, 346.	9.3	200
6	Cryo-CMOS for quantum computing. , 2016, , .		157
7	Characterization and Compact Modeling of Nanometer CMOS Transistors at Deep-Cryogenic Temperatures. IEEE Journal of the Electron Devices Society, 2018, 6, 996-1006.	2.1	142
8	A 30-frames/s, $252 \times 144$ SPAD Flash LiDAR With 1728 Dual-Clock 48.8-ps TDCs, and Pixel-Wise Integrated Histogramming. IEEE Journal of Solid-State Circuits, 2019, 54, 1137-1151.	5.4	142
9	A Time-Resolved, Low-Noise Single-Photon Image Sensor Fabricated in Deep-Submicron CMOS Technology. IEEE Journal of Solid-State Circuits, 2012, 47, 1394-1407.	5.4	141
10	Roadmap toward the 10 ps time-of-flight PET challenge. Physics in Medicine and Biology, 2020, 65, 21RM01.	3.0	136
11	CMOS-based cryogenic control of silicon quantum circuits. Nature, 2021, 593, 205-210.	27.8	136
12	A Single Photon Avalanche Diode Implemented in 130-nm CMOS Technology. IEEE Journal of Selected Topics in Quantum Electronics, 2007, 13, 863-869.	2.9	133
13	Single-photon imaging in complementary metal oxide semiconductor processes. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2014, 372, 20130100.	3.4	110
14	A $512 \times 512$ SPAD Image Sensor With Integrated Gating for Widefield FLIM. IEEE Journal of Selected Topics in Quantum Electronics, 2019, 25, 1-12.	2.9	109
15	Real-time fluorescence lifetime imaging system with a $32 \times 32$ $13 \mu\text{m}$ CMOS low dark-count single-photon avalanche diode array. Optics Express, 2010, 18, 10257.	3.4	108
16	Single-Photon Synchronous Detection. IEEE Journal of Solid-State Circuits, 2009, 44, 1977-1989.	5.4	96
17	A low-noise single-photon detector implemented in a 130nm CMOS imaging process. Solid-State Electronics, 2009, 53, 803-808.	1.4	95
18	Watermarking-based copyright protection of sequential functions. IEEE Journal of Solid-State Circuits, 2000, 35, 434-440.	5.4	94

#	ARTICLE	IF	CITATIONS
19	Architecture and applications of a high resolution gated SPAD image sensor. Optics Express, 2014, 22, 17573.	3.4	94
20	A Single-Photon Avalanche Diode Array for Fluorescence Lifetime Imaging Microscopy. IEEE Journal of Solid-State Circuits, 2008, 43, 2546-2557.	5.4	90
21	Hybrid polymer microlens arrays with high numerical apertures fabricated using simple ink-jet printing technique. Optical Materials Express, 2011, 1, 259.	3.0	89
22	A 160&#x00D7;128 single-photon image sensor with on-pixel 55ps 10b time-to-digital converter. , 2011, , .		89
23	A 1 Å— 400 Backside-Illuminated SPAD Sensor With 49.7 ps Resolution, 30 pJ/Sample TDCs Fabricated in 3D CMOS Technology for Near-Infrared Optical Tomography. IEEE Journal of Solid-State Circuits, 2015, 50, 2406-2418.	5.4	87
24	Scaling silicon-based quantum computing using CMOS technology. Nature Electronics, 2021, 4, 872-884.	26.0	84
25	A 1024\$,imes\$, 700-ps Time-Gated SPAD Line Sensor for Planetary Surface Exploration With Laser Raman Spectroscopy and LIBS. IEEE Journal of Solid-State Circuits, 2014, 49, 179-189.	5.4	83
26	System Tradeoffs in Gamma-Ray Detection Utilizing SPAD Arrays and Scintillators. IEEE Transactions on Nuclear Science, 2010, 57, 2549-2557.	2.0	81
27	A 128-Channel, 8.9-ps LSB, Column-Parallel Two-Stage TDC Based on Time Difference Amplification for Time-Resolved Imaging. IEEE Transactions on Nuclear Science, 2012, 59, 2463-2470.	2.0	81
28	Advances in digital SiPMs and their application in biomedical imaging. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2016, 809, 31-52.	1.6	78
29	Measurement and modeling of microlenses fabricated on single-photon avalanche diode arrays for fill factor recovery. Optics Express, 2014, 22, 4202.	3.4	70
30	A wide spectral range single-photon avalanche diode fabricated in an advanced 180 nm CMOS technology. Optics Express, 2012, 20, 5849.	3.4	66
31	The performance of 2D array detectors for light sheet based fluorescence correlation spectroscopy. Optics Express, 2013, 21, 8652.	3.4	66
32	A High-PDE, Backside-Illuminated SPAD in 65/40-nm 3D IC CMOS Pixel With Cascoded Passive Quenching and Active Recharge. IEEE Electron Device Letters, 2017, 38, 1547-1550.	3.9	66
33	A Scalable Cryo-CMOS Controller for the Wideband Frequency-Multiplexed Control of Spin Qubits and Transmons. IEEE Journal of Solid-State Circuits, 2020, 55, 2930-2946.	5.4	65
34	Hybrid Small Animal Imaging System Combining Magnetic Resonance Imaging With Fluorescence Tomography Using Single Photon Avalanche Diode Detectors. IEEE Transactions on Medical Imaging, 2011, 30, 1265-1273.	8.9	64
35	A 32&#x00D7;32 50ps resolution 10 bit time to digital converter array in 130nm CMOS for time correlated imaging. , 2009, , .		61
36	A Low Dark Count p-i-n Diode Based SPAD in CMOS Technology. IEEE Transactions on Electron Devices, 2016, 63, 65-71.	3.0	61

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37	A reconfigurable cryogenic platform for the classical control of quantum processors. Review of Scientific Instruments, 2017, 88, 045103.	1.3	58
38	A new single-photon avalanche diode in 90nm standard CMOS technology. Optics Express, 2010, 18, 22158.	3.4	57
39	Dynamic range extension for photon counting arrays. Optics Express, 2018, 26, 22234.	3.4	57
40	A 19.6 ps, FPGA-Based TDC With Multiple Channels for Open Source Applications. IEEE Transactions on Nuclear Science, 2013, 60, 2203-2208.	2.0	56
41	Toward One Giga Frames per Second " Evolution of in Situ Storage Image Sensors. Sensors, 2013, 13, 4640-4658.	3.8	56
42	Impact of Classical Control Electronics on Qubit Fidelity. Physical Review Applied, 2019, 12, .	3.8	55
43	A Modular, Direct Time-of-Flight Depth Sensor in 45/65-nm 3-D-Stacked CMOS Technology. IEEE Journal of Solid-State Circuits, 2019, 54, 3203-3214.	5.4	55
44	A Substrate Isolated CMOS SPAD Enabling Wide Spectral Response and Low Electrical Crosstalk. IEEE Journal of Selected Topics in Quantum Electronics, 2014, 20, 299-305.	2.9	54
45	High-Performance Back-Illuminated Three-Dimensional Stacked Single-Photon Avalanche Diode Implemented in 45-nm CMOS Technology. IEEE Journal of Selected Topics in Quantum Electronics, 2018, 24, 1-9.	2.9	53
46	Characterization and Modeling of Mismatch in Cryo-CMOS. IEEE Journal of the Electron Devices Society, 2020, 8, 263-273.	2.1	50
47	Wide-field time-gated SPAD imager for phasor-based FLIM applications. Methods and Applications in Fluorescence, 2020, 8, 024002.	2.3	50
48	Toward a 3-D Camera Based on Single Photon Avalanche Diodes. IEEE Journal of Selected Topics in Quantum Electronics, 2004, 10, 796-802.	2.9	49
49	A single photon avalanche diode array fabricated in 0.35- $\mu$ m CMOS and based on an event-driven readout for TCSPC experiments. , 2006, 6372, 212.		49
50	A first single-photon avalanche diode fabricated in standard SOI CMOS technology with a full characterization of the device. Optics Express, 2015, 23, 13200.	3.4	47
51	19.1 A Scalable Cryo-CMOS 2-to-20GHz Digitally Intensive Controller for 4 $\mu$ s–32 Frequency Multiplexed Spin Qubits/Transmons in 22nm FinFET Technology for Quantum Computers. , 2020, , .		47
52	A CMOS SPAD Imager with Collision Detection and 128 Dynamically Reallocating TDCs for Single-Photon Counting and 3D Time-of-Flight Imaging. Sensors, 2018, 18, 4016.	3.8	45
53	Characterization and Analysis of On-Chip Microwave Passive Components at Cryogenic Temperatures. IEEE Journal of the Electron Devices Society, 2020, 8, 448-456.	2.1	45
54	Fluorescence lifetime imaging with a megapixel SPAD camera and neural network lifetime estimation. Scientific Reports, 2020, 10, 20986.	3.3	44

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55	Multi-channel digital SiPMs: Concept, analysis and implementation. , 2012, , .		43
56	Fast single-photon avalanche diode arrays for laser Raman spectroscopy. Optics Letters, 2011, 36, 3672.	3.3	42
57	Nonuniformity Analysis of a 65-kpixel CMOS SPAD Imager. IEEE Transactions on Electron Devices, 2016, 63, 57-64.	3.0	42
58	Quantum correlation measurement with single photon avalanche diode arrays. Optics Express, 2019, 27, 32863.	3.4	42
59	Modeling and Analysis of a Direct Time-of-Flight Sensor Architecture for LiDAR Applications. Sensors, 2019, 19, 5464.	3.8	41
60	FPGA implementation of a 32x32 autocorrelator array for analysis of fast image series. Optics Express, 2012, 20, 17767.	3.4	39
61	Quanta burst photography. ACM Transactions on Graphics, 2020, 39, .	7.2	38
62	Single Photon Counting UV Solar-Blind Detectors Using Silicon and III-Nitride Materials. Sensors, 2016, 16, 927.	3.8	37
63	A 4 Å— 4 Å— 416 digital SiPM array with 192 TDCs for multiple high-resolution timestamp acquisition. Journal of Instrumentation, 2013, 8, P05024-P05024.	1.2	36
64	A Cryogenic 1 GSa/s, Soft-Core FPGA ADC for Quantum Computing Applications. IEEE Transactions on Circuits and Systems I: Regular Papers, 2016, 63, 1854-1865.	5.4	36
65	A 256Å—256 45/65nm 3D-stacked SPAD-based direct TOF image sensor for LiDAR applications with optical polar modulation for up to 18.6dB interference suppression. , 2018, , .		35
66	Progress in single-photon avalanche diode image sensors in standard CMOS: From two-dimensional monolithic to three-dimensional-stacked technology. Japanese Journal of Applied Physics, 2018, 57, 1002A3.	1.5	34
67	High fill-factor miniaturized SPAD arrays with a guard-ring-sharing technique. Optics Express, 2020, 28, 13068.	3.4	34
68	Quantum information density scaling and qubit operation time constraints of CMOS silicon-based quantum computer architectures. Npj Quantum Information, 2017, 3, .	6.7	33
69	A Low-Noise CMOS SPAD Pixel With 12.1 Ps SPTR and 3 Ns Dead Time. IEEE Journal of Selected Topics in Quantum Electronics, 2022, 28, 1-9.	2.9	33
70	13.2 A Fully-Integrated 40-nm 5-6.5 GHz Cryo-CMOS System-on-Chip with I/Q Receiver and Frequency Synthesizer for Scalable Multiplexed Readout of Quantum Dots. , 2021, , .		33
71	A Cryogenic Broadband Sub-1-dB NF CMOS Low Noise Amplifier for Quantum Applications. IEEE Journal of Solid-State Circuits, 2021, 56, 2040-2053.	5.4	33
72	Compact solid-state CMOS single-photon detector array for in vivo NIR fluorescence lifetime oncology measurements. Biomedical Optics Express, 2016, 7, 1797.	2.9	32

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73	Toward a Full-Flexible and Fast-Prototyping TOF-PET Block Detector Based on TDC-on-FPGA. IEEE Transactions on Radiation and Plasma Medical Sciences, 2019, 3, 538-548.	3.7	32
74	A cryo-CMOS chip that integrates silicon quantum dots and multiplexed dispersive readout electronics. Nature Electronics, 2022, 5, 53-59.	26.0	32
75	UV-Sensitive Low Dark-Count PureB Single-Photon Avalanche Diode. IEEE Transactions on Electron Devices, 2014, 61, 3768-3774.	3.0	31
76	The Cryogenic Temperature Behavior of Bipolar, MOS, and DTMOS Transistors in Standard CMOS. IEEE Journal of the Electron Devices Society, 2018, 6, 263-270.	2.1	30
77	The electronic interface for quantum processors. Microprocessors and Microsystems, 2019, 66, 90-101.	2.8	30
78	Fluorescence lifetime biosensing with DNA microarrays and a CMOS-SPAD imager. Biomedical Optics Express, 2010, 1, 1302.	2.9	29
79	SPAD imagers for super resolution localization microscopy enable analysis of fast fluorophore blinking. Scientific Reports, 2017, 7, 44108.	3.3	29
80	Characterization and Model Validation of Mismatch in Nanometer CMOS at Cryogenic Temperatures. , 2018, , .		27
81	Time estimation with multichannel digital silicon photomultipliers. Physics in Medicine and Biology, 2015, 60, 2435-2452.	3.0	26
82	11.4 A 67,392-SPAD PVTB-compensated multi-channel digital SiPM with 432 column-parallel 48ps 17b TDCs for endoscopic time-of-flight PET. , 2015, , .		26
83	The gigavision camera. , 2009, , .		25
84	EndoTOFPET-US: a novel multimodal tool for endoscopy and positron emission tomography. Journal of Instrumentation, 2013, 8, C04002-C04002.	1.2	25
85	Deep-Cryogenic Voltage References in 40-nm CMOS. IEEE Solid-State Circuits Letters, 2018, 1, 110-113.	2.0	25
86	LinoSPAD: A Compact Linear SPAD Camera System with 64 FPGA-Based TDC Modules for Versatile 50 ps Resolution Time-Resolved Imaging. Instruments, 2017, 1, 6.	1.8	23
87	Inkjet printing of SU-8 for polymer-based MEMS a case study for microlenses. Proceedings of the IEEE International Conference on Micro Electro Mechanical Systems (MEMS), 2008, , .	0.0	22
88	RTS Noise Characterization in Single-Photon Avalanche Diodes. IEEE Electron Device Letters, 2010, 31, 692-694.	3.9	22
89	Photon-Counting Arrays for Time-Resolved Imaging. Sensors, 2016, 16, 1005.	3.8	22
90	Light-In-Flight Imaging by a Silicon Image Sensor: Toward the Theoretical Highest Frame Rate. Sensors, 2019, 19, 2247.	3.8	22

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91	A Wideband Low-Power Cryogenic CMOS Circulator for Quantum Applications. IEEE Journal of Solid-State Circuits, 2020, 55, 1224-1238.	5.4	22
92	Quantum Transport in 40-nm MOSFETs at Deep-Cryogenic Temperatures. IEEE Electron Device Letters, 2020, , 1-1.	3.9	22
93	CMOS SPAD Based on Photo-Carrier Diffusion Achieving PDP >40% From 440 to 580 nm at 4 V Excess Bias. IEEE Photonics Technology Letters, 2015, 27, 2445-2448.	2.5	21
94	19.3 A 200dB FoM 4-to-5GHz Cryogenic Oscillator with an Automatic Common-Mode Resonance Calibration for Quantum Computing Applications. , 2020, , .		21
95	Engineering Breakdown Probability Profile for PDP and DCR Optimization in a SPAD Fabricated in a Standard 55 nm BCD Process. IEEE Journal of Selected Topics in Quantum Electronics, 2022, 28, 1-10.	2.9	21
96	Pixel super-resolution with spatially entangled photons. Nature Communications, 2022, 13, .	12.8	21
97	Monolithic Silicon Chip for Immunofluorescence Detection on Single Magnetic Beads. Analytical Chemistry, 2010, 82, 49-52.	6.5	20
98	A \$780 imes 800- $\mu\text{m}^2$ Multichannel Digital Silicon Photomultiplier With Column-Parallel Time-to-Digital Converter and Basic Characterization. IEEE Transactions on Nuclear Science, 2014, 61, 44-52.	2.0	20
99	Widefield High Frame Rate Single-Photon SPAD Imagers for SPIM-FCS. Biophysical Journal, 2018, 114, 2455-2464.	0.5	20
100	Subthreshold Mismatch in Nanometer CMOS at Cryogenic Temperatures. IEEE Journal of the Electron Devices Society, 2020, 8, 797-806.	2.1	20
101	Fast-fluorescence dynamics in nonratiometric calcium indicators. Optics Letters, 2009, 34, 362.	3.3	19
102	13.3 A 6-to-8GHz 0.17mW/Qubit Cryo-CMOS Receiver for Multiple Spin Qubit Readout in 40nm CMOS Technology. , 2021, , .		19
103	Heralded Spectroscopy Reveals Exciton-Exciton Correlations in Single Colloidal Quantum Dots. Nano Letters, 2021, 21, 6756-6763.	9.1	19
104	Light detection and ranging with entangled photons. Optics Express, 2022, 30, 3675.	3.4	19
105	Single-Photon Avalanche Diode Imagers Applied to Near-Infrared Imaging. IEEE Journal of Selected Topics in Quantum Electronics, 2014, 20, 291-298.	2.9	18
106	Full-field quantum imaging with a single-photon avalanche diode camera. Physical Review A, 2021, 103, .	2.5	18
107	Microparticle photometry in a CMOS microsystem combining magnetic actuation and in situ optical detection. Sensors and Actuators B: Chemical, 2008, 132, 411-417.	7.8	17
108	SPADnet: Embedded coincidence in a smart sensor network for PET applications. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2014, 734, 122-126.	1.6	17

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109	3D-Stacked CMOS SPAD Image Sensors: Technology and Applications. , 2018, , .		17
110	Voltage References for the Ultra-Wide Temperature Range from 4.2K to 300K in 40-nm CMOS. , 2019, , .		17
111	A Cryo-CMOS Digital Cell Library for Quantum Computing Applications. IEEE Solid-State Circuits Letters, 2020, 3, 310-313.	2.0	17
112	Reduction of Fixed-Position Noise in Position-Sensitive Single-Photon Avalanche Diodes. IEEE Transactions on Electron Devices, 2011, 58, 2354-2361.	3.0	16
113	Back-gate effects on DC performance and carrier transport in 22 nm FDSOI technology down to cryogenic temperatures. Solid-State Electronics, 2022, 193, 108296.	1.4	16
114	Mutually Coupled Time-to-Digital Converters (TDCs) for Direct Time-of-Flight (dTOF) Image Sensors. Sensors, 2018, 18, 3413.	3.8	15
115	Cryogenic low-dropout voltage regulators for stable low-temperature electronics. Cryogenics, 2018, 95, 11-17.	1.7	15
116	A Cryogenic CMOS Parametric Amplifier. IEEE Solid-State Circuits Letters, 2020, 3, 5-8.	2.0	15
117	Designing a DDS-Based SoC for High-Fidelity Multi-Qubit Control. IEEE Transactions on Circuits and Systems I: Regular Papers, 2020, 67, 5380-5393.	5.4	15
118	A Low-Jitter and Low-Spur Charge-Sampling PLL. IEEE Journal of Solid-State Circuits, 2022, 57, 492-504.	5.4	15
119	Dynamic time domain near-infrared optical tomography based on a SPAD camera. Biomedical Optics Express, 2020, 11, 5470.	2.9	15
120	In vitro and in vivo NIR fluorescence lifetime imaging with a time-gated SPAD camera. Optica, 2022, 9, 532.	9.3	15
121	Sub-10 ps Minimum Ionizing Particle Detection With Geiger-Mode APDs. Frontiers in Physics, 2022, 10, .	2.1	15
122	Sensor network architecture for a fully digital and scalable SPAD based PET system. , 2012, , .		14
123	Fluorescent magnetic bead and cell differentiation/counting using a CMOS SPAD matrix. Sensors and Actuators B: Chemical, 2012, 174, 609-615.	7.8	14
124	Timing optimization of a H-tree based digital silicon photomultiplier. Journal of Instrumentation, 2013, 8, P09016-P09016.	1.2	14
125	Single-Photon, Time-Gated, Phasor-Based Fluorescence Lifetime Imaging through Highly Scattering Medium. ACS Photonics, 2020, 7, 68-79.	6.6	14
126	Cryo-CMOS for Analog/Mixed-Signal Circuits and Systems. , 2020, , .		14



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127	INDEX: an inductance extractor for superconducting circuits. IEEE Transactions on Applied Superconductivity, 1993, 3, 2629-2632.	1.7	13
128	A 128-channel, 9ps column-parallel two-stage TDC based on time difference amplification for time-resolved imaging. , 2011, , .		13
129	Cryogenic CMOS Circuits and Systems: Challenges and Opportunities in Designing the Electronic Interface for Quantum Processors. IEEE Microwave Magazine, 2021, 22, 60-78.	0.8	13
130	Multimodal imaging combining time-domain near-infrared optical tomography and continuous-wave fluorescence molecular tomography. Optics Express, 2020, 28, 9860.	3.4	13
131	The Michelangelo step: removing scalloping and tapering effects in high aspect ratio through silicon vias. Scientific Reports, 2021, 11, 3997.	3.3	12
132	A Scaling Law for SPAD Pixel Miniaturization. Sensors, 2021, 21, 3447.	3.8	12
133	A Cryo-CMOS Wideband Quadrature Receiver With Frequency Synthesizer for Scalable Multiplexed Readout of Silicon Spin Qubits. IEEE Journal of Solid-State Circuits, 2022, 57, 2374-2389.	5.4	12
134	Symbolic compaction with analogue constraints. International Journal of Circuit Theory and Applications, 1995, 23, 433-452.	2.0	11
135	A new ethylene glycol-silane monolayer for highly-specific DNA detection on Silicon Chips. Surface Science, 2010, 604, L71-L74.	1.9	11
136	Timing optimization utilizing order statistics and multichannel digital silicon photomultipliers. Optics Letters, 2014, 39, 552.	3.3	11
137	Characterization of bipolar transistors for cryogenic temperature sensors in standard CMOS. , 2016, , .		11
138	First Near-Ultraviolet- and Blue-Enhanced Backside-Illuminated Single-Photon Avalanche Diode Based on Standard SOI CMOS Technology. IEEE Journal of Selected Topics in Quantum Electronics, 2019, 25, 1-6.	2.9	11
139	Image reconstruction for novel time domain near infrared optical tomography: towards clinical applications. Biomedical Optics Express, 2020, 11, 4723.	2.9	11
140	Humidity-sensitive oscillator fabricated in double poly CMOS technology. Sensors and Actuators B: Chemical, 1990, 1, 441-445.	7.8	10
141	A $1-\mu\text{m}$ Radiation-Hard Front-End in a $0.18-\mu\text{m}$ CMOS Process for the MALTA2 Monolithic Sensor. IEEE Transactions on Nuclear Science, 2022, 69, 1299-1309.	2.0	10
142	A Flexible Ultrathin-Body Single-Photon Avalanche Diode With Dual-Side Illumination. IEEE Journal of Selected Topics in Quantum Electronics, 2014, 20, 276-283.	2.9	9
143	A co-design methodology for scalable quantum processors and their classical electronic interface. , 2018, , .		9
144	A 10-to-12 GHz 5 mW Charge-Sampling PLL Achieving 50 fsec RMS Jitter, -258.9 dB FOM and -65 dBc Reference Spur. , 2020, , .		9

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145	On Analog Silicon Photomultipliers in Standard 55-nm BCD Technology for LiDAR Applications. IEEE Journal of Selected Topics in Quantum Electronics, 2022, 28, 1-10.	2.9	9
146	A Cmos Microsystem Combining Magnetic Actuation and In-Situ Optical Detection of Microparticles. , 2007, , .		8
147	A fully-integrated 780&#x00D7;800&#x03BC;m&lt;sup&gt;2&lt;/sup&gt; multi-digital silicon photomultiplier with column-parallel time-to-digital converter. , 2012, , .		8
148	Light Extraction Enhancement Techniques for Inorganic Scintillators. Crystals, 2021, 11, 362.	2.2	8
149	Single-photon avalanche diode imaging sensor for subsurface fluorescence LiDAR. Optica, 2021, 8, 1126.	9.3	8
150	Cryo-CMOS Electronics For Quantum Computing: Bringing Classical Electronics Closer To Qubits In Space And Temperature. IEEE Solid-State Circuits Magazine, 2021, 13, 54-68.	0.4	8
151	Optical-stack optimization for improved SPAD photon detection efficiency. , 2019, , .		8
152	Cryogenic CMOS for Qubit Control and Readout. , 2022, , .		8
153	First characterization of the SPADnet sensor: a digital silicon photomultiplier for PET applications. Journal of Instrumentation, 2013, 8, C12026-C12026.	1.2	7
154	Flexible ultrathin-body single-photon avalanche diode sensors and CMOS integration. Optics Express, 2016, 24, 3734.	3.4	7
155	An order-statistics-inspired, fully-digital readout approach for analog SiPM arrays. , 2016, , .		7
156	A Hybrid Readout Solution for GaN-Based Detectors Using CMOS Technology. Sensors, 2018, 18, 449.	3.8	7
157	Plug-and-play TOF-PET Module Readout Based on TDC-on-FPGA and Gigabit Optical Fiber Network. , 2019, , .		7
158	Towards Quantum 3D Imaging Devices. Applied Sciences (Switzerland), 2021, 11, 6414.	2.5	7
159	Theoretical minimum uncertainty of single-molecule localizations using a single-photon avalanche diode array. Optics Express, 2021, 29, 39920.	3.4	7
160	Cryogenic Characterization of 16 nm FinFET Technology for Quantum Computing. , 2021, , .		7
161	2.5 Hz sample rate time-domain near-infrared optical tomography based on SPAD-camera image tissue hemodynamics. Biomedical Optics Express, 2022, 13, 133.	2.9	7
162	A 65k pixel, 150k frames-per-second camera with global gating and micro-lenses suitable for fluorescence lifetime imaging. Proceedings of SPIE, 2014, 9141, .	0.8	6

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163	Fundamentals of a scalable network in SPADnet-based PET systems. , 2015, , .		6
164	From the Quantum Moore's Law toward Silicon Based Universal Quantum Computing. , 2017, , .		6
165	Hybrid superconductor-semiconductor electronics. Nature Electronics, 2019, 2, 433-434.	26.0	6
166	Blumino: The First Fully Integrated Analog SiPM With On-Chip Time Conversion. IEEE Transactions on Radiation and Plasma Medical Sciences, 2021, 5, 671-678.	3.7	6
167	Cryo-CMOS Interfaces for Large-Scale Quantum Computers. , 2020, , .		6
168	Guard-Ring-Free InGaAs/InP Single-Photon Avalanche Diode Based on a Novel One-Step Zn-Diffusion Technique. IEEE Journal of Selected Topics in Quantum Electronics, 2022, 28, 1-9.	2.9	6
169	A 500 Å— 500 Dual-Gate SPAD Imager With 100% Temporal Aperture and 1 ns Minimum Gate Length for FLIM and Phasor Imaging Applications. IEEE Transactions on Electron Devices, 2022, 69, 2865-2872.	3.0	6
170	Constraint transformation for IC physical design. IEEE Transactions on Semiconductor Manufacturing, 1999, 12, 386-395.	1.7	5
171	On the application of a monolithic array for detecting intensity-correlated photons emitted by different source types. Optics Express, 2009, 17, 15087.	3.4	5
172	An Implementation of a Spike-Response Model With Escape Noise Using an Avalanche Diode. IEEE Transactions on Biomedical Circuits and Systems, 2011, 5, 231-243.	4.0	5
173	Fluorescence lifetime imaging to differentiate bound from unbound ICG-cRGD both in vitro and in vivo. Proceedings of SPIE, 2015, , .	0.8	5
174	Towards a fully digital state-of-the-art analog SiPM. , 2017, , .		5
175	Design techniques for a stable operation of cryogenic field-programmable gate arrays. Review of Scientific Instruments, 2018, 89, 014703.	1.3	5
176	Multipurpose, Fully Integrated 128 $\times$ 128 Event-Driven MD-SiPM With 512 16-Bit TDCs With 45-ps LSB and 20-ns Gating in 40-nm CMOS Technology. IEEE Solid-State Circuits Letters, 2018, 1, 241-244.	2.0	5
177	Monolithic SPAD Arrays for High-Performance, Time-Resolved Single-Photon Imaging. , 2018, , .		5
178	Time Domain NIRS Optode based on Null/Small Source-Detector Distance for Wearable Applications. , 2019, , .		5
179	Phasor-based widefield FLIM using a gated 512 $\times$ 512 single-photon SPAD imager. , 2019, 10882, .		5
180	CMOS 3D-Stacked FSI Multi-Channel Digital SiPM for Time-of-Flight PET Applications. , 2020, , .		5

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181	Distributed coincidence detection for multi-ring based PET systems. , 2014, , .		4
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